INCH-POUND

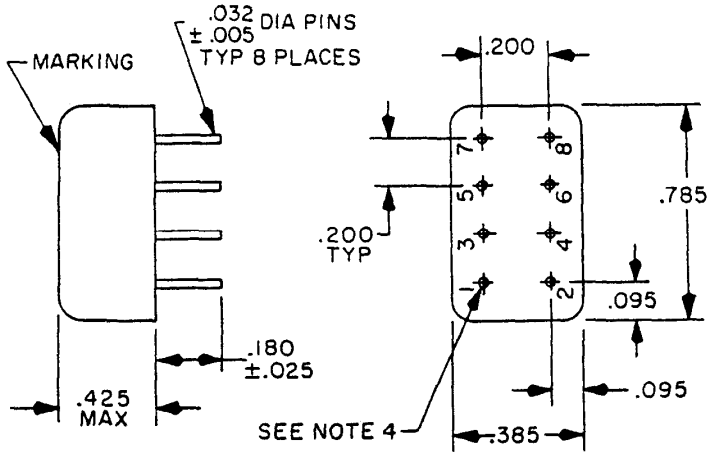
MIL-DTL-15370/18C
7 May 2008
SUPERSEDING
MIL-DTL-15370/18B
18 June 2003

DETAIL SPECIFICATION SHEET

COUPLERS, DIRECTIONAL, (PIN PLUG-IN TERMINATION)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

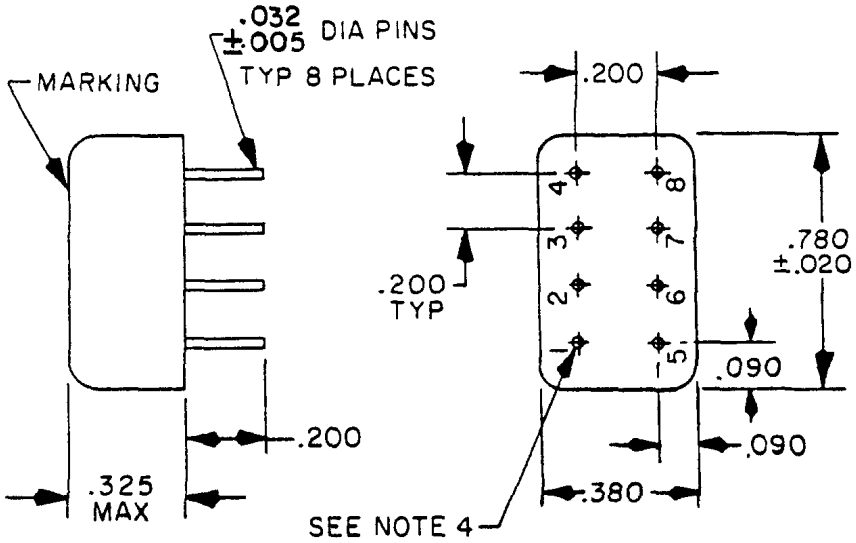
The requirements for acquiring the couplers described herein shall consist of this specification sheet and MIL-DTL-15370.



NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Pin numbers are shown for reference - need not appear on the part.
4. Insulator around pin 1 shall be a contrasting color.
5. Unless otherwise specified, tolerance is ± .016 (.41 mm).
6. Termination for P/N M15370/18-001 through M15370/18-003, M15370/18-008:

   Input - pin 1
   Coupled output - pin 3
   Output - pin 4
   Ground - pins 2, 5, 7, and 8
   Pin 6 is not used in the circuit.

FIGURE 1. Dimensions and configuration for part numbers M15370/18-001 through M15370/18-003, M15370/18-008, and M15370/18-009.

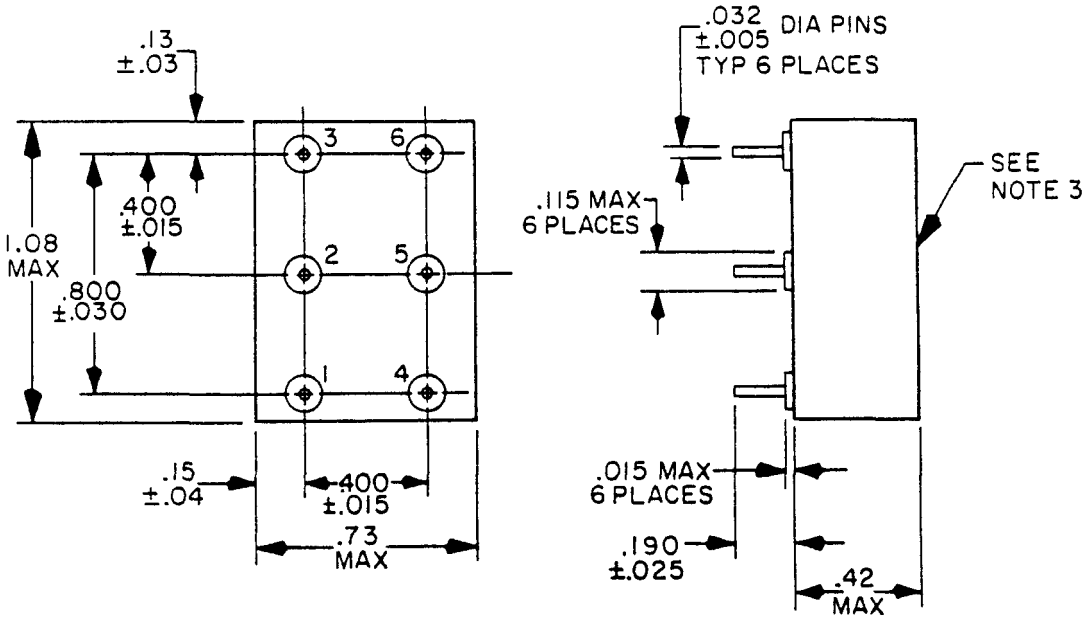


Inches	mm
.005	0.13
.020	0.51
.032	0.81
.090	2.29
.0200	5.08
.325	8.26
.380	9.65
.780	19.81

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Pin numbers are shown for reference - need not appear on the part.
4. Insulator around pin 1 shall be a contrasting color.
5. Unless otherwise specified, tolerance is ±.016 (0.41 mm).
6. Termination for P/N M15370/18-004:

   Input - pin 1
   Coupled output - pin 4
   Output - pin 5
   Ground - pins 2, 3, 5, 7, and 8.

FIGURE 2. Dimensions and configuration for part number M15370/18-004.

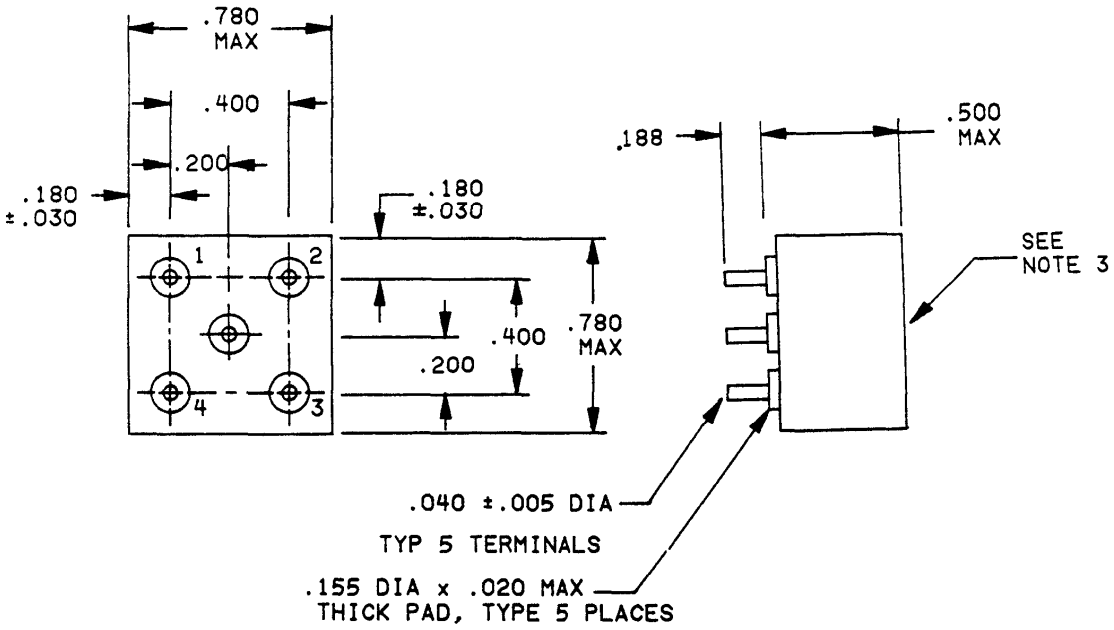


Inches	mm	Inches	mm
.005	0.13	.13	3.3
.015	0.38	.15	3.8
.025	0.64	.190	4.83
.03	0.8	.400	10.20
.030	0.76	.42	10.7
.032	0.81	.73	18.5
.04	1.0	.800	20.3
.115	2.92	1.08	27.4

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Marking to include appropriate labeling of input, output and coupled port, above those respective pins.
4. Pin numbers are shown for reference - need not appear on the part.
5. Termination for P/N M15370/18-005 through M15370/18-007:

   Input - pin 1
   Coupled output - pin 4
   Output - pin 3
   Ground - pins 2 and 5
   Pin 6 not used in circuit.

FIGURE 3. Dimensions and configuration for part numbers M15370/18-005 through M15370/18-007.

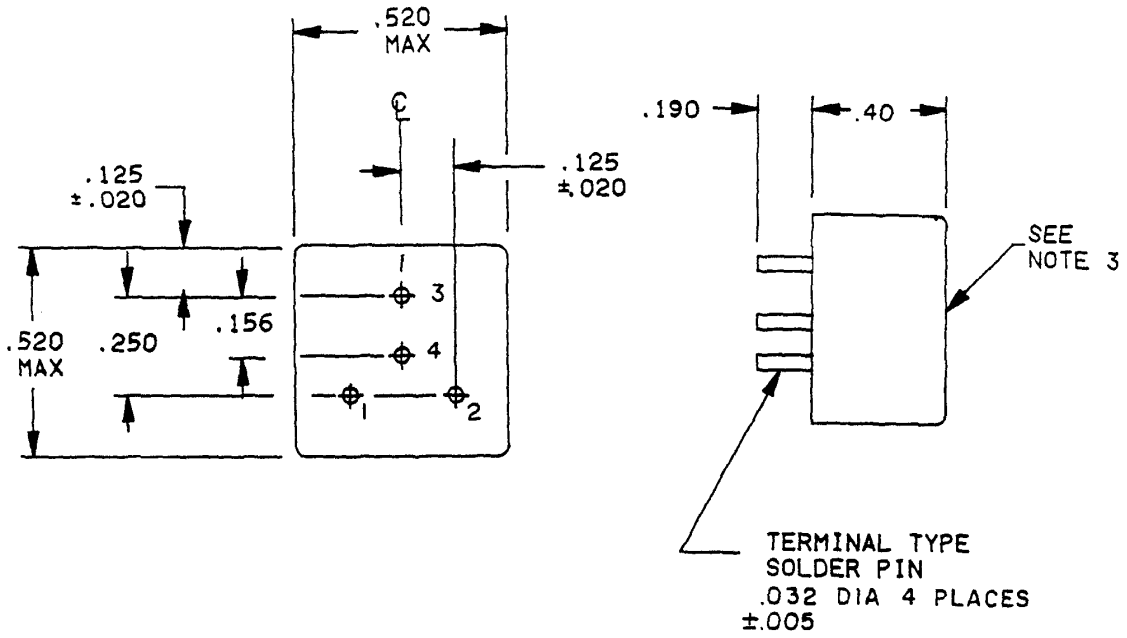


Inches	mm	Inches	mm
.005	0.13	.188	4.77
.020	0.51	.200	5.08
.040	1.02	.400	10.83
.155	3.94	.500	12.70
.180	4.57	.780	19.81

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Marking to include appropriate labeling of input, output and coupled port, above those respective pins.
4. Pin numbers are shown for reference - need not appear on the part.
5. Unless otherwise specified, tolerance is ±.020.
6. Termination for P/N M15370/18-010 and M15370/18-013:

   Input - pin 5
   Output - pin 4
   Ground - pin 3
   Coupled output - pin 2
   Internal standoff - pin 1.

FIGURE 4. Dimensions and configuration for part numbers M15370/18-010 through M15370/18-013.



Inches	mm	Inches	mm
.005	0.13	.125	3.18
.020	0.51	.156	3.96
.032	0.81	.190	4.83
.040	1.02	.250	6.35
		.520	13.21

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Marking to include appropriate labeling of input, output and coupled port, above those respective pins.
4. Pin numbers are shown for reference - need not appear on the part.
5. Unless otherwise specified, tolerance is ± .010 (0.25 mm).
6. Termination for P/N M15370/18-011 and M15370/18-012:

   Input - pin 1
   Output - pin 2
   Coupled output - pin 3
   Ground - pin 4.

FIGURE 5. Dimensions and configuration for part numbers M15370/18-011 through M15370/18-012.

TABLE I. Electrical characteristics.

Dash number	Frequency range	Coupling (dB)		Coupling variation (dB) max	Effective directivity (dB) min	Insertion loss (dB) max	VSWR max		RF input power to primary	
		Nominal	Tolerance				Primary line	Secondary line	Over frequency range	Avg
	MHz								MHz	Watts
001NS	0.2 - 250	19.5	±0.5	±0.5	30 @ 0.2-2.0 MHz 25 @ 2.0-125 20 @ 125-250 MHz	0.6 @ 0.2-0.4 MHz 0.5 @ 0.4-125 0.6 @ 125-250 MHz	1.30:1	1.50:1	0.2 - 2.0 02 - 250	1.5 4.0
002NS	0.5 - 500	11.5	±0.6	±0.6	25 @ 0.5-5.0 MHz 25 @ 5-250 15 @ 250-500 MHz	0.3 @ 0.5-1.0 MHz 0.5 @ 0.5-500 MHz	1.30:1	1.70:1	0.5 - 5.0 0.5 - 500	1.5 3.0
003NS	1 - 1000	11.0	±0.5	±0.5	30 @ 1-10 MHz 20 @ 10-500 20 @ 500-1000 MHz	0.6 @ 1-10 MHz 0.6 @ 10-500 1.0 @ 500-1000 MHz	1.50:1	1.50:1	1.0 - 10 1.0 - 1000	1.0 2.0
004NS	10 - 400	10.0	±0.3	±0.25	35	0.65	1.10:1	1.10:1	10 - 400	10.0
005NS	50 - 400	10.0	±1.0	±1.0	25	0.6	1.30:1	1.30:1	50 - 400	5.0
006NS	50 - 400	15.0	±1.0	±1.0	25	0.6	1.30:1	1.30:1	50 - 400	5.0
007NS	50 - 400	20.0	±1.0	±1.0	25	0.6	1.30:1	1.30:1	50 - 400	5.0
008NS	250 - 1000	10.0	±1.0	±1.0	30 @ 250-400 MHz 20 @ 400-800 15 @ 800-1000 MHz	0.4 @ 250-600 MHz 0.7 @ 600-1000 MHz	1.80:1	1.80:1	250 - 1000	5.0
009NS	0.01 - 35	15.0	±0.5	±0.5	20	0.5	1.30:1	1.30:1	0.01 - 35	4.0
010NS	1 - 60	20.0	±1.0	±0.5	25 @ 2-32 MHz 20 @ 1-60 MHz	0.2 @ 2-32 MHz 0.3 @ 1-60 MHz	1.50:1	1.50:1	1 - 60	2.0
011NS	200 - 280	20.0	±1.0	±1.0	25	0.5	1.30:1	1.30:1	200 - 280	1.0
012NS	10 - 400	20.0	±1.0	±0.5	25 @ 20-200 MHz 20 @ 10-400 MHz	0.35 @ 20-200 MHz 0.55 @ 10-400 MHz	1.40:1	1.40:1	10 - 400	2.0
013NS	30 - 500	10.0	±1.0	±0.25	30 @ 30-300 MHz 25 @ 300-500 MHz	0.3 @ 30-300 MHz 0.6 @ 300-500 MHz	1.30:1	1.30:1	30 - 500	5.0

TABLE II. Physical and environmental characteristics. 1/

Dash number	Weight	Temperature range (operating on top non-operating on the bottom)	Thermal shock method 107	Vibration high-frequency method 204	Shock (specified pulse) method 213	Seal method 112	Solderability method 208	Resistance to soldering heat method 210	Terminal strength method 211
001	5.0 g	-55°C to +100°C -65°C to +100°C	---	D	I	---	Yes	B	---
002	5.2 g	-55°C to +100°C -65°C to +100°C	---	D	I	A	Yes	B	A (3 lbs)
003	5.2 g	-55°C to +100°C -65°C to +100°C	---	D	I	A	Yes	B	A (3 lbs)
004	6.0 g	-54°C to +100°C -65°C to +100°C	A	D	A	A	Yes	B	---
005	11.4 g	-54°C to +100°C -65°C to +125°C	---	---	H	---	Yes	---	---
006	11.4 g	-54°C to +100°C -65°C to +125°C	---	---	H	---	Yes	---	---
007	11.4 g	-54°C to +100°C -65°C to +125°C	---	---	H	---	Yes	---	---
008	5.0 g	-55°C to +100°C -65°C to +100°C	---	D	I	A	Yes	B	---
009	5.0 g	-55°C to +100°C -65°C to +100°C	---	D	I	A	Yes	B	---
010	7.0 g	-54°C to +100°C -65°C to +125°C	---	---	H	---	Yes	---	---
011	7.0 g	-54°C to +100°C -65°C to +125°C	---	---	H	---	Yes	---	---
012	7.0 g	-54°C to +100°C -65°C to +125°C	---	---	H	---	Yes	---	---
013	7.0 g	-54°C to +100°C -65°C to +125°C	---	---	H	---	Yes	---	---

1/ Letters denote test conditions of MIL-STD-202.

REQUIREMENTS:

Design, construction and physical dimensions: See figures 1 through 5.

Electrical: See table I.

Physical and environmental characteristics: See table II.

Weight: See table II.

Marking: Part number shall be located as shown on figures 1 through 5.

Part number: M15370/18- (and a dash number from table I).

Referenced Documents: In addition to MIL-DTL-15370, this document references the following:
MIL-STD-202

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

Review activities:
Navy - AS, CG, MC, OS, SH

(Project 5985-2008-034)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at http://assist.daps.dla.mil/.